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Cont

spanning the putative initiation codon of *heag* was used to test inhibition of proliferation. The sense ODN and a scrambled sequence (gtcgggtaccagtaggaggg) (SEQ ID NO: 16) were used as controls. Data shown in Figure 16A confirms the efficiency of the antisense ODN treatment in reducing the *heag* mRNA content in EFM cells. A reduction in *heag* mediated K<sup>+</sup> currents in SHSY-5Y cells by treatment with antisense ODN is shown in Fig. 16B and C.

IN THE CLAIMS

Cancel claims 2, 11-13, 16-31 and 33.

Amend claims 1, 3-6, 8-9, 14, 15 and 32 as follows:

Sub D1

1. (Twice Amended) A nucleic acid molecule comprising a nucleic acid sequence encoding a (poly)peptide having a function of the human K<sup>+</sup> ion *eag* channel, wherein the nucleic acid sequence is selected from the group consisting of:

- C9
- (a) a nucleic acid sequence comprising a nucleic acid molecule encoding the polypeptide having the amino acid sequence SEQ ID NO:3 or SEQ ID NO:4;
  - (b) the nucleic acid sequence SEQ ID NO: 13 or SEQ ID NO:14;
  - (c) a nucleic acid sequence that hybridizes to the complementary strand of a nucleic acid molecule of (a) or (b) at 4XSSC at 65°C or at 4XSSC at 42°C in 50% formamide; and
  - (d) a nucleic acid molecule being degenerate to the sequence of the nucleic acid molecule of (c).

~~2, 3~~ (Twice Amended) The nucleic acid molecule of claim 1, wherein the nucleic acid molecule is DNA.

~~3, 4~~ (Twice Amended) The nucleic acid molecule of claim 1, wherein the nucleic acid molecule is RNA.

C<sup>10</sup> ~~4~~  
~~5~~ (Twice Amended) The nucleic acid molecule of claim 1, wherein the nucleic acid sequence encodes a fusion protein.

~~5, 6~~  
~~6~~ (Twice Amended) A vector comprising the nucleic acid molecule of claim 1.

~~7~~  
~~8~~ (Twice Amended) A host cell transformed with the vector of claim ~~6~~ <sup>5</sup>.

C<sup>11</sup> ~~8~~  
~~9~~ (Twice Amended) The host cell of claim ~~8~~ <sup>7</sup>, wherein the cell is selected from the group consisting of a mammalian cell, a fungal cell, a plant cell, an insect cell and a bacterial cell.

C<sup>12</sup> ~~Sub 2~~  
14. (Twice Amended) A composition comprising the nucleic acid molecule of claim 1, a vector comprising said nucleic acid molecule, a polypeptide encoded by said nucleic acid molecule, an antibody specifically directed against said polypeptide, or optionally, in further combination with any one of the nucleic acid molecule, the vector, the polypeptide or the antibody, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

C12  
Cont

Sub D2

15. (Twice Amended) A diagnostic composition comprising the nucleic acid molecule of claim 1, a vector comprising said nucleic acid molecule, a polypeptide encoded by said nucleic acid molecule or an antibody specifically directed against said polypeptide.

C13

Sub D3

32. (Twice Amended) A kit comprising the nucleic acid molecule of claim 1, a vector comprising the nucleic acid molecule, a polypeptide encoded by the nucleic acid molecule or an antibody specifically directed against said polypeptide.

Add the following claims 34-44:

Sub D4

34. (Added) The kit according to claim 32 comprising the nucleic acid molecule, the vector, the polypeptide and the antibody.

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35. (Added) The nucleic acid molecule according to claim 1, wherein the nucleic acid sequence is the sequence of part (a).

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36. (Added) The nucleic acid molecule according to claim 1, wherein the nucleic acid sequence is the sequence of part (b).

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37. (Added) The nucleic acid molecule according to claim 1, wherein the nucleic acid sequence is the sequence of part (c).

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38. (Added) The nucleic acid molecule according to any one of claims 35-37, wherein the nucleic acid sequence encodes a fusion protein.

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39. (Added) A vector comprising the nucleic acid molecule according to any one of claims 35-37.

141 116

<sup>19</sup>  
~~40.~~ (Added) A host cell transformed with the vector of claim ~~39.~~ <sup>18</sup>

<sup>20</sup>  
~~41.~~ (Added) A method of producing the (poly)peptide encoded by the nucleic acid molecule according to any one of claims ~~35-37~~ <sup>14 16</sup>, comprising the steps of culturing the host comprising said nucleic acid molecule and isolating the produced (poly)peptide.

*sub D5* <sup>21</sup>  
42. (Added) A composition comprising the nucleic acid molecule according to any one of claims 35-37, a vector comprising said nucleic acid molecule, a polypeptide encoded by said nucleic acid molecule, an antibody specifically directed against said polypeptide, or optionally, in further combination with any one of the nucleic acid molecule, the vector, the polypeptide or the antibody, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

*C14 cont*  
43. (Added) A diagnostic composition comprising the nucleic acid molecule according to any one of claims 35-37, a vector comprising said nucleic acid molecule, a polypeptide encoded by said nucleic acid molecule or an antibody specifically directed against said polypeptide.

44. (Added) A kit comprising the nucleic acid molecule according to any one of claims 35-37, a vector comprising the nucleic acid molecule, a polypeptide encoded by the nucleic acid molecule or an antibody specifically directed against said polypeptide.